

In the Claims:

1-14. (cancelled)

15. (amended) An integrated circuit comprising:

A. a semiconductor substrate;

B. functional IP core circuits formed on the substrate, the IP core circuits forming a periphery on the substrate and having core functional input leads and core functional output leads that extend beyond that periphery; and

C. test circuits formed on the substrate within the periphery of the functional IP core circuits, the test circuits including:

i. a test data input lead extending beyond the periphery of the functional IP core circuits;

ii. a test data output lead extending beyond the periphery of the functional IP core circuits;

iii. a test clock lead extending beyond the periphery of the functional IP core circuits;

iv. a test mode select lead extending beyond the periphery of the functional IP core circuits;

v. a test access port coupled to the test data input lead, the test data output lead, the test clock lead, and the test mode select lead;

vi. test data registers coupled to the test data input lead, and the test data output lead;

vii. an instruction register coupled to the test data input lead and the test data output lead; and

viii. an external register present lead separate from the test data input lead and the test data output lead, connected to the instruction register and extending beyond the periphery of the functional IP core circuits.

16. (previously presented) The integrated circuit of claim 15 in which the instruction register includes a capture-shift-update register section and the external register present lead is connected to the capture-shift-update register section.

17. (previously presented) The integrated circuit of claim 15 in which the instruction register includes a decode section and the external register present lead is connected to the decode section.

18. (previously presented) The integrated circuit of claim 15 in which the instruction register includes a capture-shift-update register section and a decode section and the external register present lead is connected to the capture-shift-update register section and the decode section.

19. (previously presented) The integrated circuit of claim 15 in which the external register present lead is only an input lead that carries only an input signal.